

## ABSTRACT

A non-invasive method and apparatus for monitoring of the function of the heart and lungs in vulnerable patients. An analysis of the activity of the heart is made in correspondence to the respiratory system. Using the method of the invention, precise tracking of the changes of the mutual heart-lung interactions cycle are made, enabling better definitions of heart conditions. Within breath variability factor is introduced for tracking heart condition. Failing heart assisting methods and improved diagnostic methods are facilitated using the monitoring system of the invention.